

How many more titles our author could have "raked together" we know not, but a "simple title is more modest," he thinks. Well, perhaps so. Certainly we agree with him that half a dozen etc.'s are too many, and we suggest also that the two he employs are redundant, since one alone is a plural. But our good doctor nowhere preaches consistency; he is rather an opportunist—a clever man who trims his sail to the breeze, said breeze being the public and his patients, and since, in his present work, he writes for medical men, we may for once let the "censors smile," and excuse the doctor if he does not practise what he preaches.

If there is any one thing prominent in the book it is the "hard-sense" of the writer—or perhaps we should say that kind of "hard-sense" that is nearest akin to a truly agreeable, enlightened selfishness. Our writer preaches philanthropy but not abasement; in helping others he would have us retain our own strength, not waste it; he throws no pearls before swine. On the other hand, he neglects no honest person's interests. His main aim is to inculcate *professional tact and business sagacity*. Will any one say that there is not a great want of these qualities in the medical profession? We think not.

No one will read this book without feeling that many of his own crude experiences have been deftly worked out into a recognizable plan of personal ethics. Each will recognize therein reasons for his failures, reasons for his successes. The old practitioner, according to which of the two has fallen to his lot, may felicitate himself or repent; the young one may take heed and "form" himself. And in either event Dr. Cathell may feel assured that he has done his fellow physicians good service.

**L' hérédité psychologique.**—Par TH. RIBOT, Directeur de la Revue Philosophique; deuxième édition, entièrement refondue. Paris: Germer Baillière, pp. 417.

The first edition of this work, with its many *depassées* ideas and old title, will be laid upon the shelf, now that M. Ribot has given us this delightful new work, for, such it really is, with its changed name, tone, and arrangement. Old parts have been taken from and new parts added to it, unimportant details dropped, noticeable lacunæ satisfactorily filled in with the results of investigation and observation by Darwin, Herbert Spencer, Galton, Lucas, and others. M. Ribot shows by his title his particular aim; for although he enters rather fully into the details of

somatic heredity, the hereditary transmission of mental faculties considered in their laws, consequences, and causes being so intimately connected with the physiological that this was necessary yet psychological heredity is what he especially writes to prove.

The book is divided into three parts : Facts, Laws, and Consequences. In the first part, facts, the author begins with heredity of instinct, the lowest degree of intelligence, defined by Hartman "as an act in conformance with an aim, but without knowledge of the aim," a phase of heredity which is comparatively easy to demonstrate, and takes us to the heredity of intellectual activity, the highest and most complex action of the brain, a phase of heredity which is most difficult to state ; he takes the synthetic method and shows that the results of mental activity are transmitted. This part is full of authenticated facts dating from old time to to-day ; they are well chosen and pertinent to their especial headings.

In the second part, the laws, the author analyzes the mass of facts borrowed from animal and human psychology, pathology, and history, and shows that they are not mere isolated cases, resulting from the accidental concurrence of other laws ; he compares his facts, generalizes them, and evolves from them a biological, universal law, heredity,—a necessary, invariable law, except when secondary causes intervene. He reduces all the facts of heredity to four formulæ.

1. Parents have a tendency to bequeath to their children all their psychical characters, general and individual, ancient and newly acquired (law of heredity direct and immediate).

2. One of the parents may have a preponderating influence upon the mental construction of the child (law of the preponderance of transmission of characters).

3. The descendants often inherit the physical and mental qualities of their ancestors and resemble them without resembling their parents (atavism).

4. Certain physical and mental dispositions, very distinctly determined, generally morbid, manifest themselves in the descendants at the same age as in the ascendants (law of heredity at corresponding ages). The author introduces an ingenious formula by Prof. Lemoigne (of Milan), analyzing the theory of inherited resemblances. He quotes largely from Galton's "Hereditary Genius," and from De Candolle. They arrive at the same results : psychological heredity and the objective reality of its laws.

In the third part, consequences of heredity, M. Ribot shows

that heredity is one of the principal factors of the law of evolution, and that in accumulating the little differences it produces effects in apparent disproportion to the primitive causes. No one escapes from the law of subjection to and modification by surroundings, which deteriorate or improve his faculties. Chance and, above all, education can develop his intelligence, imagination, and character, and as these acquired modifications may be transmitted by heredity, we can say that evolution of psychical faculties is a law of the intellectual world, and that the gain of each generation is a profit to the next. M. Ribot says that if the power of heredity were better understood, it would be the ruling law of marriage. In Schopenhauer's theory of love, the "Genius of the Species," divested of its metaphysical phraseology, is the power of heredity. Love is blind instinct, and those complex states which constitute the passion of love, which are expressed by a choice and impose a preference,—all that, says Schopenhauer, is nothing but an embellishment and accessory.

In the conclusion, M. Ribot makes a brief extract from the most important contemporaneous hypotheses—pangenesis of Darwin, Galton's modification of this theory by his hypothesis of the stirpes, Herbert Spencer's principles of biology, Haeckel's pangenesis, and a theory of M. Balbiani. M. Ribot differs with the idealists; his formula is that physiological heredity is the cause of psychological heredity, or, more properly speaking, psychological heredity is a phase of biological heredity, since all psychical phenomena are inherent to some organ or tissue, and mental manifestations are transmitted as vital manifestations.

M. Ribot concludes this most interesting and valuable book with a comparison between the man of nature and the civilized man. He says: "We do not know certainly what man was in the beginning, and we cannot say what he will become; but let us take the naked savage, with his brain full of images and empty of ideas, in unformed language, and his idols, associated closely with Nature,—a part of her,—and compare him with the man farthest removed from nature, most civilized, most refined, initiated in all the niceties of art, literature, and science, in all the elegances and complications of social life. Between these two extremes the distance seems infinite, and yet it has been traversed step by step. Without doubt this evolution, the complex play of numerous causes, is not due entirely to heredity, but we will have badly succeeded in our task if the reader does not comprehend that heredity has largely contributed to it."